

**AMENDMENTS TO THE DRAWINGS**

The attached sheets of drawings include changes to FIGs. 5 and 12. The Replacement Sheets replace the original sheets containing FIGs. 5 and 12. FIG. 5 has been amended to illustrate the base 1003 being fixedly mounted in the lens barrel body 1002 and the magnetic sensor 204 being mounted on the base 1003. FIG. 12 has been amended to illustrate the base 1003 being fixedly mounted in the lens barrel body 1002 and the first and second magnetic sensors 204A, 204B being mounted on the base 1003.

Attachments: Two (2) Replacement Sheets - amended FIGs. 5 and 12

## **REMARKS**

Claims 1-7 and 10-12 are present in this application and pending on the merits.

Of the claims under examination, claim 1 is the only independent claim.

In the Final Office Action, the title of the invention was objected to as not descriptive, the drawings were objected to as failing to show every feature of the invention specified in the claims, and claims 1 and 10 were objected to as based on various informalities. Also, claims 1-7 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,220,461 (*Inoue*) and claims 1, 2, 4-7, and 10-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent No.

JP H05-181048 (*Watanabe*).

Applicants traverse the objections and rejections listed above and respectfully request reconsideration for at least the following reasons.

### **Objection to the Specification**

In the Final Office Action, the title of the invention was objected as allegedly not being descriptive. *Final Office Action* at 2. By this Amendment, Applicants have amended the title to recite “LENS POSITION DETECTING DEVICE INCLUDING A POSITION DETECTING MAGNET AND A MAGNET FORCE DETECTING SENSOR.” Applicants submit that the objection to the title has been rendered moot by the amendments to the title and therefore request that the objection be withdrawn.

### **Objection to the Drawings**

In the Final Office Action, the drawings were objected to as failing to show every feature of the invention specified in the claims. *Final Office Action* at 2. In particular, the Office stated that “the base being fixedly mounted in a lens barrel body and the

magnetic sensor(s) being mounted on the base . . . must be shown or the feature(s) cancelled from the claim(s)." *Id.* By this Amendment, Applicants have amended FIG. 5 to illustrate the base 1003 being fixedly mounted in the lens barrel body 1002 and the magnetic sensor 204 being mounted on the base 1003, as recited by independent claim 1. Applicants have also amended FIG. 12 to illustrate the base 1003 being fixedly mounted in the lens barrel body 1002 and the first and second magnetic sensors 204A, 204B being mounted on the base 1003, as recited by dependent claim 10. No new matter has been added. These amendments have been incorporated into the attached Replacement Sheets containing FIGS. 5 and 12.

Applicants respectfully submit that the drawings, as amended, comply with 37 C.F.R. § 1.83(a), and request the Office withdraw the objection to the drawings.

**Objection to the Claims**

In the Final Office Action, claims 1 and 10 were objected to as containing various informalities. *Final Office Action* at 3. With respect to claim 1, the Office asserted that "the term 'position of a lens on a base' renders the claim indefinite." *Id.* In particular, the Office asserted that "the claims disclose that the position detecting magnet or the magnetic force detecting sensor is mounted on the base. [However, n]either of these orientations is shown in the drawings . . . [and] sensor 204 is not depicted in any connection with the base and 'floats' in the drawing." *Id.* at 4. By this Amendment, Applicants have amended FIG. 5 to illustrate the orientation of the position detecting magnet and the magnetic force detecting sensor. This amendment is consistent with the recitation of the originally filed specification at paragraphs [0169]-[0173], which state:

The lens position detecting device 200 includes a position detecting magnet 202 [and] a magnetic force detecting sensor 204 . . . The position detecting magnet 202 is mounted on a rear surface of the lens holder frame 1460 for movement in the optical axis direction in unison with the lens holder frame 1460 . . . [And t]he magnetic force detecting sensor 204 is mounted on the base 1003 in confronting relation to the position detecting magnet 202, and is disposed on a straight line that passes through the position detecting magnet 202 parallel to the optical axis.

Accordingly, Applicants submit that the disclosure of the originally filed specification and the amendments to FIG. 5 render the objection to independent claim 1 moot.

With respect to claim 10, the Office asserted that “two magnetic force detecting sensors are not depicted in the drawings, and in particular not in the orientation of claim 11 . . . where the two magnetic force detecting sensors are disposed on either side of the magnet.” *Final Office Action* at 4. By this Amendment, Applicants have amended FIG. 12 to illustrate a first and second magnetic force detecting sensor, each mounted on the base, disposed in locations on each side of the position detecting magnet. This amendment is consistent with the recitation of the originally filed specification at paragraphs [0228]-[0229], which state:

The magnetic force detecting sensor 204' includes first and second magnetic force detecting sensors 204A, 204B . . . The first and second magnetic force detecting sensors 204A, 204B are mounted on the base 1003 such that they confront the position detecting magnet 202 on a straight line parallel to the optical axis that extends through the position detecting magnet 202 and they are positioned in respective two positions forward and rearward of the position detecting magnet 202 in the optical axis direction.

Accordingly, Applicants submit that the disclosure of the originally filed specification and the amendments to FIG. 12 render the objection to independent claim 10 moot.

**Rejection Under 35 U.S.C. § 102(b) based on Inoue**

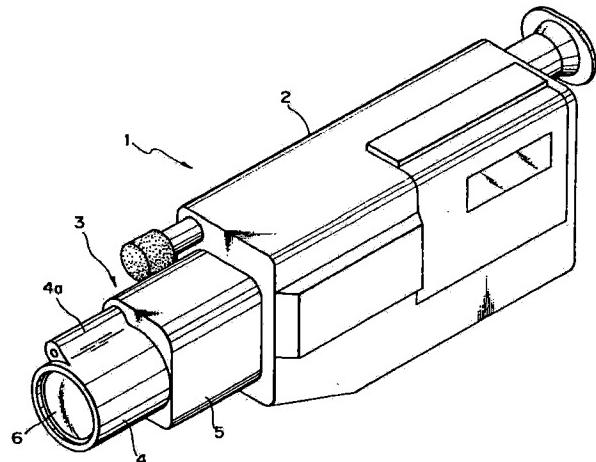
In the Final Office Action, claims 1-7 were rejected under 35 U.S.C. § 102(b) as being anticipated by *Inoue*. *Final Office Action* at 5. Of the claims listed in the rejection, claim 1 is the only independent claim rejected under § 102(b) based upon *Inoue*, and Applicants respectfully traverse the Office's rejection of claim 1 thereunder.

To establish anticipation under 35 U.S.C. § 102, the Office must establish that a reference teaches, either expressly or inherently, each and every element of a claim. See M.P.E.P. § 2131 (citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). A rejection under § 102 is proper only when the claimed subject matter is identically described or disclosed in the prior art. See *In re Arkley*, 455 F.2d 586, 587 (CCPA 1972).

Applicants' maintain that claim 1 is allowable over *Inoue*, because *Inoue* does not disclose, among other elements, a "lens position detecting device for detecting the position of a lens on a base in an optical axis direction, the **base being fixedly mounted in a lens barrel body**." In contrast, *Inoue* discloses, at most, a lens apparatus where the magnetic force detecting sensor is mounted directly to the lens barrel body.

*Inoue* is directed to a lens barrel apparatus for a camera having an automatic focusing function. As illustrated in FIG. 3 of *Inoue* reproduced below, *Inoue* discloses a barrel apparatus 3 including a front side outer shell 4 coupled to a rear side outer shell 5

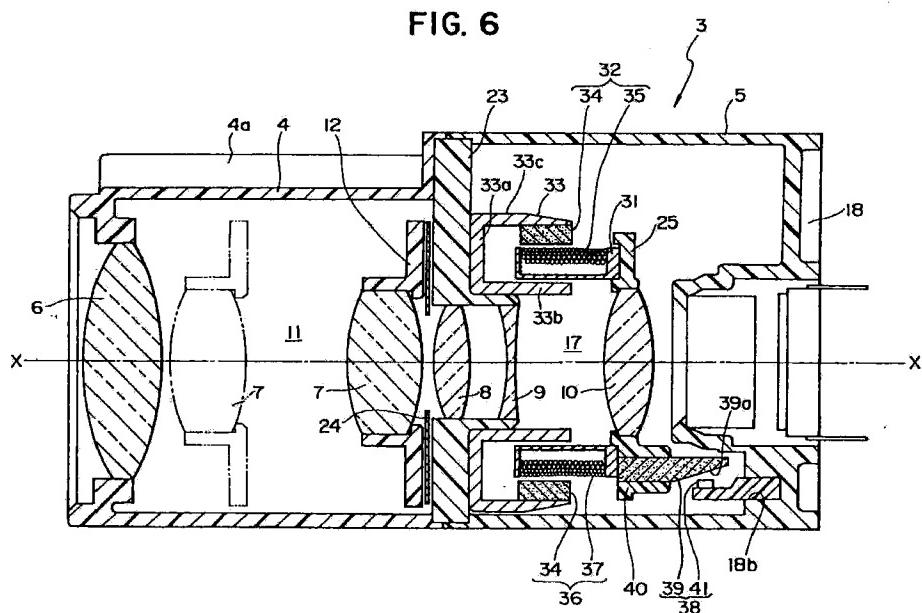
that extends from a front face of the body 2 of the camera 1. *Inoue* at col. 3, ll. 62-68--  
col. 4, ll. 1-5.



**Inoue Figure 3**

As illustrated in FIG 6. of *Inoue* reproduced below, lenses 6 and 7, positioned in the front side of outer shell 4, constitute a zooming lens. *Inoue* at col. 4, ll. 10-12.  
Lenses 8, 9, and 10, positioned in the read side of outer shell 5, and constitute a focusing system. *Id.* at col. 4, ll. 13-14.

**FIG. 6**



### Inoue Figure 6

The rejection statement asserts that *Inoue* discloses “a lens position detecting device for detecting the position of a lens (10) on a base (18) in an optical system . . . the base being fixedly mounted in a lens barrel body.” *Final Office Action* at 5. As illustrated in FIG. 6 and recited by *Inoue*, the rear wall 18, which the rejection statement equates to the claimed “base,” is not a separate component from the lens barrel body, but rather, a portion of the rear side outer shell 5, *i.e.*, **a portion of the lens barrel body**. The rejection statement asserts that “a magnetic force detecting sensor (41) [is] mounted on said base [18].” *Final Office Action* at 5. However, the Hall effect element 41, which the rejection statement equates to the claimed magnetic force detecting sensor, is mounted in a “mounting recess 18b formed at a left lower portion of the rear wall 18 of the rear side outer shell 5.” *Inoue* at col. 7, ll. 54-56. Because the rear side outer shell 5 is a portion of the **lens barrel body**. That is, the Hall effect element 41 is mounted directly on the **lens barrel body**, the Hall effect element 41 is not mounted a “base being fixedly mounted in a lens barrel body,” as required by independent claim 1. Specifically, the Hall effect element 41 is mounted directly to an inner surface of a lens barrel body without first being mounted to a base which is fixedly mounted to the lens barrel body.

For at least the above reasons, independent claim 1 is allowable over the disclosure of *Inoue*. Applicants respectfully request reconsideration of independent claim 1 and withdrawal of the § 102(b) rejection based on *Inoue*.

Further, claims 2-7 and 10-12 each depend from independent claim 1, and are allowable for at least the same reasons as provided above. Moreover, Applicants note

that dependent claims 2-7 and 10-12 include additional limitations that even further distinguish the claimed invention from *Inoue*.

**Rejection Under 35 U.S.C. § 103(a) based on Watanabe**

In the Final Office Action, claims 1, 2, 4-7, and 10-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Watanabe*. *Final Office Action* at 7. Of the claims listed in the rejection, claim 1 is the only independent claim rejected under § 103(a) based upon *Watanabe*. Applicants respectfully submit that *Watanabe* fails to disclose or render obvious all of the subject matter recited in independent claim 1.

"The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the present application would have been obvious. . . . [R]ejections on obviousness cannot be sustained with mere conclusory statements." M.P.E.P. § 2142, 8th Ed., Rev. 6 (Sept. 2007) (citations omitted). "All words in a claim must be considered in judging the patentability of that claim against the prior art." M.P.E.P. § 2143.03. "In determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the present application as a whole would have been obvious. M.P.E.P. § 2141.02(I) (emphases in original). "[T]he framework for objective analysis for determining obviousness under 35 U.S.C. § 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). . . . The factual inquiries . . . [include] determining the scope and content of the prior art and] . . . [a]scertaining the differences between the present application and the prior art." M.P.E.P. § 2141(II). "Office personnel must explain why the difference(s) between the prior art and the present

application would have been obvious to one of ordinary skill in the art.” M.P.E.P. § 2141(III).

Here, a *prima facie* case of obviousness has not been established because the Office Action does not properly ascertain the differences between Applicants’ claims and the prior art. Applicants’ independent claim 1 discloses a lens position detecting device for “detecting the position of a lens on a base in an optical axis direction, the base being fixedly mounted in a lens barrel body, the device comprising . . . a magnetic force detecting sensor mounted on the other of said lens and said base, for generating a detected signal having a magnitude depending on the intensity of a magnetic force generated from magnetic poles of said position detecting magnet.” The rejection statement asserts that *Watanabe* teaches “a lens position detecting device for detecting the position of a lens (L1) on a base in an optical axis direction . . . the device comprising: a position detecting magnet (11a,11b, see translation paragraph [7] and [22] where photosensors 14,15 are contemplated as alternatively being magnetic sensors . . . ; [and] a magnetic force detecting sensor (14,15 . . . ) [is] mounted on said base.” *Final Office Action* at 7. The rejection statement acknowledges that “*Watanabe* does not explicitly teach the base being fixedly mounted in a lens barrel body,” and urges that it “would have been obvious . . . to mount the magnetic sensor 14,15 of *Watanabe* on a base . . . so that the magnet and sensor would be on the same plane, that is fixedly mounted to the lens barrel because doing so would ensure that the magnetic sensors would be in proper alignment with the magnets and thereby would ensure most efficient detection of the magnetic force strength.” *Id.* at 7-8.

*Watanabe*, however, does not disclose either a lens barrel body or a base fixedly mounted to a lens barrel body. *Watanabe* is directed to an optical instrument that detects the reference position of lens and determines the absolute position, *i.e.*, the position at start-up, based on the number of steps of the stepping motor from the reference position. *Watanabe* at [0005]. While, in the system of *Watanabe*, the orientation of the lens L1 and the alleged position detecting magnets 11a, 11b are established relative each other, presumably by the lens holding tube 11, *Watanabe* does not disclose the relationship or orientation of the alleged detecting magnets 11a, 11b with respect to the photosensor 14, 15. *Watanabe* discloses that the detecting magnets “11a or 11b moves to the photosensor 14” and that the photosensor thereby “detects that this focus lens group L1 arrived at the reference position.” *Id.* at [0007].

While the system of *Watanabe* may maintain the location of the position detecting magnet 11a, 11b with respect to the lens L1, presumably by use of a fixed orientation of the lens holding tube 11, *Watanabe* is silent with respect to maintaining the location or orientation of the photosensor 14, 15 with respect to either the position detecting magnet 11a, 11b or the optical device as a whole. Indeed, *Watanabe* is devoid of any teaching or suggestion of a lens barrel body and therefore, is completely silent with respect to a “base fixedly mounted in a lens barrel body,” let alone a teaching or suggestion a position detection magnet 11a, 11b or photosensor 14, 15 being mounted to a base which is in-turn fixedly mounted to a lens barrel body. At least because *Watanabe* provides no disclosure or suggestion of the relationship or orientation of the detecting magnets 11a, 11b with respect to the photosensor 14, 15, a lens barrel body, or a base mounted to lens barrel body, *Watanabe* fails to disclose or

suggest as a minimum a "base being fixedly mounted in a lens barrel body," as required by independent claim 1.

Accordingly, Applicants submit that *Watanabe* does not anticipate or render obvious independent claim 1. Applicants, therefore, request reconsideration and withdrawal of the pending § 103(a) rejection based on *Watanabe*.

Further, claims 2, 4-7, and 10-12 each depend from independent claim 1, and are allowable for at least the same reasons as provided above. Moreover, Applicants note that dependent claims 2, 4-7, and 10-12 include additional limitations that even further distinguish the claimed invention from *Watanabe*.

### **Conclusion**

The preceding remarks are based only on the arguments in the Final Office Action, and therefore do not address patentable aspects of the invention that were not addressed by the Examiner in the Final Office Action. The claims may include other elements that are not shown, taught, or suggested by the cited art. Accordingly, the preceding remarks in favor of patentability are advanced without prejudice to other possible bases of patentability.

Applicants respectfully request that this Reply After Final under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1-7 and 10-12 in condition for allowance. Furthermore, Applicants respectfully point out that the final action by the Examiner presented some new arguments as to the application of the art against Applicants' invention. It is respectfully submitted that the entering of this Reply would allow the Applicants to respond to the final rejections and place the application in condition for allowance.

In view of the foregoing remarks, Applicants submit that this claimed invention is neither anticipated nor rendered obvious in view of the prior art references previously cited against this application. Applicants therefore request the entry of this Reply, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this Amendment and charge any additional required fees to our Deposit Account 06-0916.

Respectfully submitted,

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**Attachments:** One Replacement Sheet containing amended FIG. 5.  
One Replacement Sheet containing amended FIG. 12.